

SPECIFICATION AMENDMENTS

On page 1, insert above line 1, insert--Priority Claim

The present application claims priority on European Patent Application 03252654.3 filed April 25, 2003.--

On page 1, above line 1, insert--Field of the Invention--

Paragraph on line 1 of page 1 has been amended as follows:

The present invention relates to a method of creating a borehole in an earth formation. ~~In the production of hydrocarbon fluid from an earth formation, boreholes are drilled to provide a conduit for hydrocarbon fluid flowing from a reservoir zone to a production facility to surface. In conventional drilling operations the borehole is provided with tubular casing of predetermined length at selected intervals of drilling. Such procedure leads to the conventional nested arrangement of casings whereby the available diameter for the production of hydrocarbon fluid becomes smaller with depth in stepwise fashion. This stepwise reduction in diameter can lead to technical or economical problems, especially for deep wells where a relatively large number of separate casings is to be installed.~~

On page 1, above line 16, insert--Background of the Invention

In the production of hydrocarbon fluid from an earth formation, boreholes are drilled to provide a conduit for hydrocarbon fluid flowing from a reservoir zone to a production facility to surface. In conventional drilling operations the borehole is provided with tubular casing of predetermined length at selected intervals of drilling. Such procedure leads to the conventional nested arrangement of casings whereby the available diameter for the production of hydrocarbon fluid becomes smaller with depth in stepwise fashion. This stepwise reduction in diameter can lead to technical or economical problems, especially for deep wells where a relatively large number of separate casings is to be installed. --

On page 1, delete line 16-20.

On page 2, delete line 4-25.

On page 2, above line 26, insert--Summary of the Invention--

Paragraph on line 26 of page 2 has been amended as follows:

~~--In accordance with the invention there is provided~~ The present inventions include a method of creating a borehole in an earth formation, the method comprising the steps of:

- a) drilling a section of the borehole and lowering an expandable tubular element into the borehole whereby a lower portion of the tubular element extends into the drilled borehole section;
- b) radially expanding said lower portion of the tubular element so as to form a casing in the drilled borehole section; and
- c) separating an upper portion of the tubular element from said lower portion so as to allow the separated upper portion to be moved relative to said lower portion.

On page 3, delete line 7-33.

On page 4, delete line 26-33.

On page 5, delete line 1-4.

Paragraph on line 24 of page 5 has been amended as follows:

~~-- In another aspect of the invention, there is provided~~ The present inventions include a drilling assembly for use in the method of the invention, the drilling assembly being of a size allowing the assembly to be moved through the tubular element when unexpanded, the drilling assembly comprising a drill bit, a downhole motor arranged to drive the drill bit, and movement means for moving the drilling assembly through the tubular element.--

Paragraph on line 32 of page 5, ending on line 10 of page 6, has been amended as follows:

~~-- In a further aspect of the invention there is provided~~ The present inventions include an expansion assembly for use in the method of the invention, the expansion assembly being operable between a radially expanded mode in which the expansion assembly is of a diameter larger than the inner diameter of the tubular element when

unexpanded, and a radially retracted mode in which the expansion assembly is of a diameter smaller than the inner diameter of the tubular element when unexpanded, and wherein the expansion assembly comprises actuating means for actuating the expansion assembly between the radially expanded mode and the radially retracted mode thereof.--

On page 6, above line 11, insert--Brief Description of the Drawings--

On page 8, above line 10, insert--Detailed Description of the Invention--

On page 8, above line 12, insert the following paragraph:

--In the description below the terms "casing" and "liner" are used without implied distinction between such terms, whereby both terms generally refer to tubular elements used in wellbores for strengthening and/or sealing same.--

On page 6, above line 3, insert the following paragraphs:

--The term "unexpanded portion" of the tubular element is intended to refer to a portion of the tubular element which is to be expanded to a larger diameter. Thus it is to be understood that such "unexpanded portion" can be a portion which has not yet been subjected to expansion before or to a portion which has already been subjected to expansion.

With the expander system of the invention it is achieved that the expander may no longer need to be accurately repositioned after each expansion cycle. By simply exerting an axial force of moderate magnitude to the expander (when in the retracted mode) in the direction in which expansion of the tubular element is progressing, the expander moves forward until the contact section contacts the inner surface of the tubular element. The expander thereby becomes automatically repositioned to perform the next expansion cycle.

Such axial force of moderate magnitude is suitably provided by the weight of the expander, by a pulling string connected to the expander, or by any other suitable means connected to the expander, such as a tractor, a weight element or a drill string. Also drag from a fluid stream passing along the expander, or jet-action from a stream of fluid jetted from the expander during movement to the retracted mode thereof, can provide sufficient force to move the expander forward.

Preferably the expander includes an expansion surface extending in axial direction and being operable to move radially outward so as to expand the tubular element during movement of the expander from the retracted mode to the expanded mode thereof, said expansion surface being of varying diameter in axial direction.

Suitably the contact section has an outer surface coinciding with the expansion surface.

The diameter of the expansion surface preferably increases continuously in axial direction. For example, the expansion surface can be a tapering surface, a frustoconical surface, a convex surface, or a stepwise tapered or convex surface.

To ensure that the tubular element is expanded in a uniform manner it is preferred that the expansion surface is arranged to move radially outward in substantially uniform manner along the length thereof during movement of the expander from the retracted mode to the expanded mode thereof.

In a preferred embodiment the expander comprises an expander body including a plurality of body segments spaced along the circumference of the expander body, each segment extending in longitudinal direction of the expander and being movable between a radially retracted position and a radially expanded position.

The expander body is suitable provided with a plurality of longitudinal slots spaced along the circumference of the expander body, each said slot extending between a pair of adjacent body segments. Each body segment is, for example, at both ends thereof integrally formed with the expander body.

The expander body is preferably a tubular expander body, and the actuating means includes an inflatable member arranged within the tubular expander body so as to move each body segment radially outward upon inflation of the inflatable member.--

On page 16, delete line 6-24.

On page 21, above line 1, insert --We claim:--